

CLAIMS

What is claimed is:

1. A self-propelled, operator-carrying, vehicular sod laying machine for supporting, transporting, placing and unrolling sod rolls upon a surface comprising:
 - a. a frame having a forward end, a rearward end, a left side, and a right side,
 - b. a plurality of wheels mounted to the frame for rolling transport of the frame along a surface, a front wheel being located proximate the forward end at the right side, a front wheel being located proximate the forward end at the left side, and at least one rear wheel being located proximate the rearward end,
 - c. a pair of generally parallel, laterally displaceable, elongated arms disposed between the front wheels and extending forwardly from the frame forward end, each of the arms having a roll end and a pivot end, the pivot end being pivotably attached to the frame to pivot on an axis parallel to the axis of the front wheels to cause vertical displacement of the roll end of the arms,
 - d. a sod roll supporting shaft attachable to the roll ends of the arms, and
 - e. a drive system for pivoting the arms and rotating the wheels.
2. The sod-laying machine defined in claim 1 further comprising an operator control station proximate the forward end of the frame, the control

station including controls for pivoting the arms for vertical movement of the forward ends, controls for lateral movement of the arms to vary the distance between the arms, and controls for the speed and direction of the wheel rotating drive system.

5 3. The sod-laying machine defined in claim 2 wherein the operator control station is further comprised of an operator-carrying seat.

10 4. The sod-laying machine defined in claim 3 further comprising hydraulic drive means for laterally displacing the arms to accommodate a plurality of sod roll widths.

15 5. The sod-laying machine defined in claim 4 wherein the drive means for pivoting the arms is comprised of a hydraulic cylinder.

20 6. The sod-laying machine defined in claim 4 wherein the drive means for rotating the wheels is comprised of independently controllable hydraulic motors rotatably attached to the front wheels.

25 7. A self-propelled, operator-carrying, vehicular sod laying machine for supporting, transporting, placing and unrolling sod rolls upon a surface comprising:

- a. a frame having a forward end, a rearward end, a left side, and a right side,
- b. a plurality of wheels mounted to the frame for rolling transport of the frame along a surface, a front wheel being located proximate the forward end at the right side, a front wheel being located

proximate the forward end at the left side, and at least one rear wheel being located proximate the rearward end,

- c. a pair of generally parallel, laterally displaceable, elongated arms disposed between the front wheels and extending forwardly from the frame forward end, each of the arms having a roll end and a pivot end, the pivot end being pivotably attached to the frame to pivot on an axis parallel to the axis of the front wheels to cause vertical displacement of the roll end of the arms,
- d. a sod roll supporting shaft attachable to the roll ends of the arms,
- e. a hydraulic drive system for laterally displacing the arms,
- f. a hydraulic actuator for pivoting the arms,
- g. a left drive wheel hydraulic drive motor rotatably linked exclusively to the left front wheel,
- h. a right drive wheel hydraulic drive motor rotatably linked exclusively to the right front wheel,
- i. an operator control station proximate the forward end of the frame, the control station including controls for pivoting the arms for vertical movement of the forward ends, controls for lateral movement of the arms to vary the distance between the arms, controls for independently controlling the speed and direction of rotation of each drive wheel, and an operator-carrying seat.

8. The sod laying machine defined in claim 7 wherein the drive means for rotating the wheels is continuously variable speed hydraulic motors.

9. The sod-laying machine defined in claim 8 wherein the rear wheels are idler caster wheels.

10. The sod-laying machine defined in claim 9 wherein the drive means for rotating the wheels has a multiplicity of drive speeds including higher speeds for sod roll transport and lower speeds for sod roll placement.

11. The sod laying machine of claim 8 wherein the drive means for rotating the wheels has a multiplicity of drive speeds including higher speeds for sod roll transport and lower speeds for sod roll placement.

12. The sod-laying machine defined in claim 7 wherein the rear wheels are idler caster wheels.

13. The sod laying machine of claim 12 wherein the drive means for rotating the wheels has a multiplicity of drive speeds including higher speeds for sod roll transport and lower speeds for sod roll placement.

14. The sod laying machine of claim 13 wherein the drive wheels are rotatably affixed to box frame members that extend forwardly from the frame.

15. The sod laying machine of claim 14 wherein a fluid tank is formed within a box frame member.

16. A method for making a self-propelled, operator-carrying, vehicular sod laying machine for supporting, transporting, placing and unrolling sod rolls upon a surface comprising the steps of:

- a. forming a frame having a forward end, a rearward end, a left side, and a right side,

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- b. rotatably mounting a plurality of wheels to the frame for rolling transport of the frame along a surface, a front wheel being located proximate the forward end at the right side, a front wheel being located proximate the forward end at the left side, and at least one rear wheel being located proximate the rearward end,
- c. forming a pair of elongated arms, each with a roll end and a pivot end,
- d. pivotably mounting to the frame the pair of generally parallel, laterally displaceable, spaced-apart, elongated arms between the front wheels and extending each of the arms forwardly from the frame forward end, the pivot end being pivotable on an axis parallel to the axis of the front wheels to cause vertical displacement of the roll end of the arms,
- e. removeably attaching a sod roll supporting shaft to the roll ends of the arms,
- f. operably attaching a hydraulic actuator for laterally displacing the arms,
- g. operably attaching a hydraulic actuator for pivoting the arms,
- h. installing a left drive wheel hydraulic drive motor rotatably linked exclusively to the left front wheel,
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- i. installing a right drive wheel hydraulic drive motor rotatably linked exclusively to the right front wheel,

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- j. installing an operator control station proximate the forward end of the frame, the control station including controls for pivoting the arms for vertical movement of the forward ends, controls for lateral movement of the arms to vary the distance between the arms, controls for independently controlling the speed and direction of rotation of each drive wheel, and an operator-carrying seat.

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17. The method of claim 16 further comprising the step of installing continuously variable speed hydraulic front wheel drive motors.

18. The method of claim 17 further comprising the step of installing an idler caster wheel at the rearward portion of the frame.

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19. The method of claim 18 further comprising the step of installing a transverse rocking beam pivotable on the medial frame forward-rearward axis and placing a ground-contacting idler caster wheel at each end of the rocking beam.

20. The method of claim 19 further comprising the step of installing wide floatation tires at the front driving wheels.